C. J. NASH.

DRAFT ARM FOR RAILWAY CARS.

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1,340,285. **Patented May 18, 1920.**

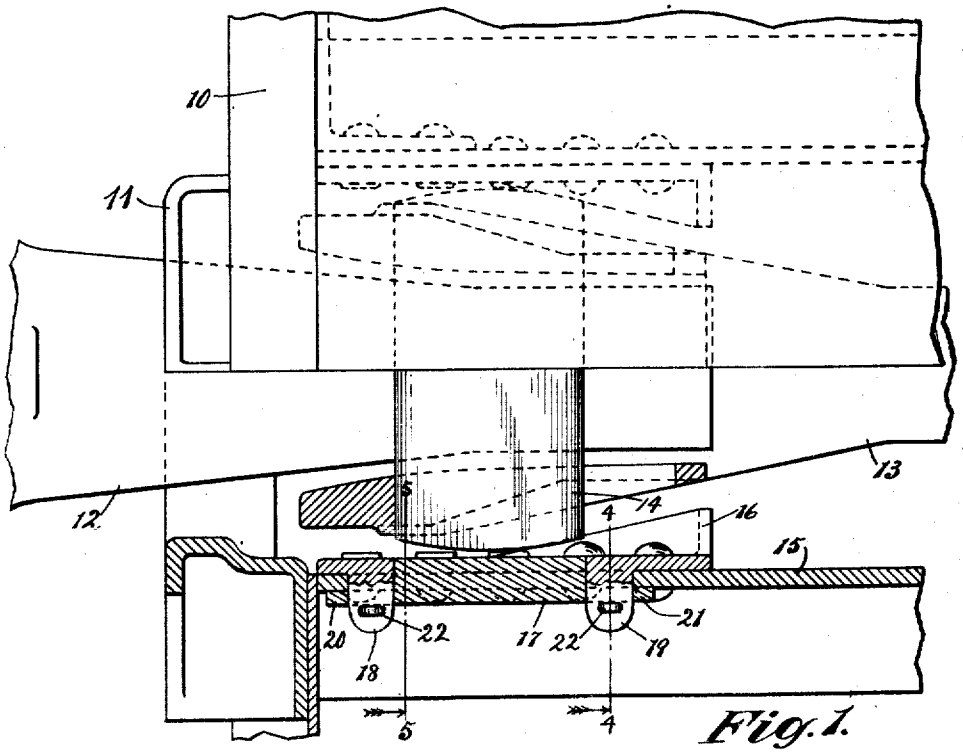

Fig. 1.

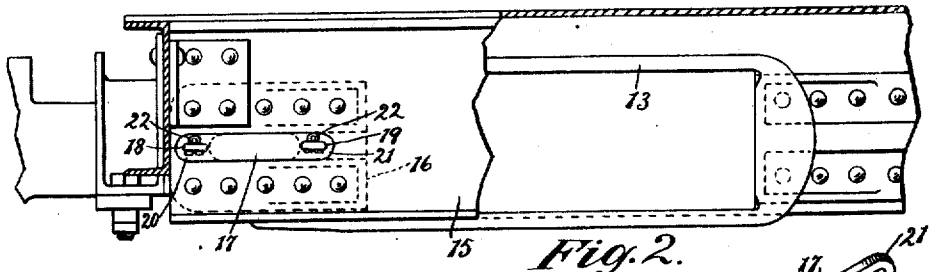

Fig. 2.

Fig. 3.

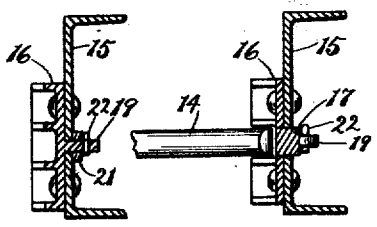

Fig. 4. Fig. 5.

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UNITED STATES PATENT OFFICE.

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DRAFT-ARM FOR RAILWAY-CARS.

1,340,285. Specification of Letters Patent. Patented May 18, 1920.

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To all whom it may concern:

Be it known that I, CHARLES J. NASH, a citizen of the United States, and resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Draft-Arms for Railway-Cars, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

The invention relates to improvements in draft arms for railway cars whereby the use of a short key for connecting the draw bar and its extension is facilitated, the assembling and disassembling of these parts without requiring the removal of the draft gear from the car is permitted, and a smooth bearing surface for the end of the key is provided.

The invention consists broadly in a draft arm having an aperture for the insertion of the key, and a filler block secured within the aperture; and more specifically to detailed construction as hereinafter described.

In the drawings;

Figure 1 is a detail plan view of the bottom of a car and of the draft gear, some parts being shown in plan section;

Fig. 2 is a detail vertical section of the structure shown in Fig. 1, the view being taken outside of the center sills;

Fig. 3 is a view in perspective of the filler block for the draft plate aperture, and

Figs. 4 and 5 are sectional details taken on the line 4—4 and 5—5 respectively of Fig. 1.

The term "draft arm" as herein used is intended to have a sufficiently broad application to include any form of element fixed to the car and to which draft and buffing stresses are communicated through the draft gear. Such elements are given various names in the trade according to their particular form, such as draft arm, draft sill, draft plate and cheek plate. These variations of form have, however, no bearing upon the present invention which is applicable to any of them. Furthermore, these draft elements, while always provided with some form of shoulder for engagement by an element of the draft gear, may have such shoulder cast integral with its body portion or take the form of a lug secured to the body as by means of rivets. Again, it is immaterial so far as relates to this invention, except in its more specific form, which type of so-called draft lug is employed.

In the drawings there is shown at 10 an end sill of a car and at 11 its buffing block. A draw bar of any desired form is shown at 12, the draw bar extension or yoke at 13 and a short key for uniting these two members at 14. By a short key is meant one which is of a length less than the distance between the two draft arms, as distinguished from a common type of key which is of such length that it extends through slots in the draft arms. A draft arm is represented at 15 and as shown the forward draft lug 16 is a separate element secured to the inner face of the draft arm by means of rivets, its body portion extending forwardly to the end of the arm. An aperture is formed in the arm through which the key 14 may be inserted and in the structure, as shown, this aperture is through not only the body of the arm but also the body portion of the draft lug 16. This aperture is filled, after the key has been inserted, by means of a block, as 17, the inner face of which is flush with the inner face of the draft arm and thus provides a smooth and continuous surface over which the end of the key may travel as the draw bar moves longitudinally in the exigencies of service. The block 17 may be secured in place by any suitable means. As shown, this is accomplished by providing the draft arm with a pair of outstanding apertured lugs 18, 19, and the block with a pair of end flanges 20, 21, each being apertured, as shown, to fit upon the lugs 18, 19. A pin, preferably of the cotter type, as 22, being set into the apertures in the lugs 18, 19, the block 17 is securely held in place.

Where, as in the construction shown, the draft lug 16 is an attached element, the lugs 18, 19, may be conveniently formed upon it, the aperture in the body of the draft arm 15 being sufficiently long to accommodate them and these lugs being spaced apart a distance slightly greater than the width of the key to permit its insertion between them.

The inner surface of the block 17 being flush with the inner surface of the draft arm (such surface being of the arm itself or the inner face of an attached draft lug) the key 14 will slide freely upon it and from it to the surface of the arm. The in-

vention is an advantage in connection with any type of car and draft gear construction where the short form of key is used, but is of still greater utility where certain types of draft gear are used which permit a long range of movement of the draw bar.

The object in view in having the inner face of the filler block flush with the inner face of the draft arm is to avoid the presence of shoulders upon which the key may catch as the draw bar moves longitudinally. This object is secured by a construction in which such shoulders are avoided even though the inner faces of the block and arm may not be strictly in the same plane. As shown, the ends of the key are rounded and it is obvious that such a key will move freely over a surface which is not entirely smooth.

I claim as my invention:

1. A draft arm for railway cars having an opening for the insertion of a coupler securing key, and a filler block secured in the aperture and having its inner face flush with the inner face of the arm.

2. A draft arm for railway cars having an opening for the insertion of a coupler securing key, a draft lug secured to the inner face of the arm and having an opening alined with that of the arm, and a filler block secured in such openings and having its inner face flush with the inner face of the lug.

3. In combination, a draft arm having an opening for the insertion of a draft gear key, a draft lug secured to the arm and having a body portion extending beyond the opening and having a key admitting aperture alined with such opening and a pair of lugs projecting therethrough a filler block for such aperture and having apertures for receiving the lugs, and means associated with the lugs for securing the block.

CHARLES J. NASH.